Government of
Saskatchewan

Annual Report
2001-2002

Saskatchewan
Energy and Mines

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Letters of Transmittal

102-07104/

The Honourable Lynda Haverstock
Lieutenant Governor
Province of Saskatchewan

May it please Your Honour:

I respectfully submit the Annual Report of Saskatchewan Energy and Mines for the fiscal year ending March 31, 2002.

Eldon Lautermilch
Minister of Industry and Resources

The Honourable Eldon Lautermilch
Minister of Industry and Resources

Dear Sir:

I have the honour of submitting the Annual Report of Saskatchewan Energy and Mines for the fiscal year ending March 31, 2002.

Respectfully submitted,

Larry Spannier
Deputy Minister

Saskatchewan Energy and Mines Overview

Vision

Prosperity and economic strength from responsible energy and mineral development.

Mandate

The mandate of the Department of Energy and Mines is to ensure full and responsible development and utilization of Saskatchewan's energy and mineral resources to create jobs and sustain economic activity in Saskatchewan, and to optimize revenues to fund government programs and services.

Principles

- Service to our industry clients.
- Work in partnership to ensure full and responsible development of energy and mineral resources.
- Pursue excellence in all we do. We have a proven record of accomplishment and reliability, reflecting our high standards of quality and innovation.
- Prudently manage the public, financial and other resources entrusted to us so that Saskatchewan taxpayers receive maximum value for their tax dollars.
- We strive to conduct ourselves with the utmost integrity and professionalism.
- Work as a team and continually seek opportunities to nurture trust, communication and co-operation.

Legislation

The legislated mandate of the department is set out in the following Acts:

- *The Department of Energy and Mines Act* that provides the Minister with the responsibility for the exploration, development, management and conservation of non-renewable resources and the development, management and conservation of energy.
- *The Oil and Gas Conservation Act* that allows the orderly exploration for, and development of, oil and gas in the province and optimization of recovery of these resources.
- *The Crown Minerals Act* that allows for the leasing of Crown mineral rights and provides authority to collect royalties on Crown dispositions.
- *The Freehold Oil and Gas Production Tax Act* that provides the authority to tax freehold oil and gas in the province.
- *The Mineral Taxation Act, 1983* that provides authority to tax mineral production and mineral rights.
- *The Mineral Resources Act, 1985* that provides for the orderly exploration, development, conservation, management and primary production of mineral resources in Saskatchewan.
- *The Pipelines Act, 1998* that provides the authority regarding the construction, operation and abandonment of oil, natural gas and other pipelines.

Core Businesses

Resource Development –
To provide exploration and geological data, studies, maps and analysis of Saskatchewan's resources to assist in and to stimulate the development of oil, gas and mineral resources, and to sell Crown oil, gas and mineral rights.

Resource Policy –
To provide analysis and recommendations regarding the impact of policies, legislation and regulation on market trends, royalty/tax systems and the development of new technology on industry performance in order to ensure optimal resource development and to promote and protect Saskatchewan's interests in intergovernmental issues involving the resource sector.

Energy Planning and Development –
To develop policies and programs to encourage the responsible use of energy and the efficient and effective delivery of energy services in Saskatchewan, to monitor and analyse market trends, industry performance and regulatory initiatives in the energy sector, and to co-operate with Saskatchewan Environment to jointly develop Saskatchewan's policy regarding global climate change.

Resource Revenue Collection –
To ensure the timely and optimal collection of revenues owing to the government from the development of Saskatchewan's energy and mineral resources.

Resource Regulation –
To ensure the licensing, inspection and setting of guidelines for drilling and operation of oil and gas wells so that industry activities are conducted in a safe, environmentally sound and responsible manner, regulating seismic activity, the disposition and administration of Crown mineral, oil and gas rights, and the collection, review and distribution of Crown mineral, oil and gas statistics.

Administration –
To provide human resource, financial, communications, procurement and accommodation services for the department.

Goals

Energy and Mines has the following goals:

- Optimal development of energy and mineral resources;
- Responsible use and delivery of energy in Saskatchewan; and
- Effective client and public services.

Highlights of 2001-02

At the end of March 2002, the government announced that it was restructuring the Departments of Energy and Mines and Economic and Co-operative Development into a new Department of Industry and Resources. The mandate of the new Department of Industry and Resources is to achieve full and responsible development of Saskatchewan's energy and mineral resources, to work with businesses and co-operatives to expand the Saskatchewan economy by promoting, co-ordinating and implementing policies, strategies and programs that encourage sustainable economic growth and optimize revenue to fund government programs and services. The new department will develop an integrated strategic plan that will outline its vision, principles, goals, objectives and performance measures for the upcoming fiscal year. The department will continue to regulate and administer Crown mineral, oil and gas dispositions to develop these resources in a full and responsible manner.

The 2001-02 fiscal year saw a number of significant accomplishments by Saskatchewan Energy and Mines.

The department announced a series of initiatives designed to assist the mineral exploration industry and develop the province's mineral resources:

a) Introduced a 10 per cent exploration tax credit for investors in grassroots exploration using flow-through shares.

b) Enhanced the geoscience program.

c) Revised regulations for mineral dispositions.

d) Established a joint industry-government committee to address a number of regulatory issues.

e) Reduced fees for mineral exploration permits by 50 per cent.

The department participated on a committee that reviewed issues pertaining to property assessments, mill rates and road maintenance agreements. The committee included representatives from the oil and gas industry, local government associations and other departments.

The department continued to work with the Petroleum Technology Research Centre and Natural Resources Canada to support the establishment of the International Energy Agency (IEA) Weyburn Carbon Dioxide Monitoring Project. This world-class project, with an estimated value of $20 million, has attracted funding from the European Union and the United States Department of Energy to support a team of internationally renowned experts from a number of countries to monitor the injection of carbon dioxide into the Weyburn reservoir. The project will enhance technical understanding of carbon dioxide enhanced oil recovery and the sequestration of carbon dioxide as a means of reducing the emission of this greenhouse gas.

The royalty and tax provisions that apply to incremental oil from the Weyburn Unit CO_2 project were extended for all future CO_2 projects implemented in the province.

In co-operation with Saskatchewan Environment, the department continued to represent Saskatchewan's interests during meetings of provincial, federal and territorial officials to develop a National Implementation Plan to respond to climate change.

The department provided financial support for the establishment of the Energy Conservation, Climate Change and Technology Network at the Saskatchewan Research Council, the University of Saskatchewan and the University of Regina to address climate change issues and to assist in the development of climate change initiatives.

The department established and chaired an interdepartmental working group of officials to advise on the development of initiatives for a Greenprint for Energy Conservation.

Construction began on the International Test Centre for Carbon Dioxide Capture and Sequestration being established at the Regina Research Park next to the University of Regina. The Test Centre will provide facilities to undertake research on the separation of carbon dioxide from flue gas emissions of facilities such as coal-fired electricity generation facilities. The Test Centre will include a bench scale lab at the university and refurbishment of a commercial scale pilot plant at the Boundary Dam power station.

A new all-time record was set for oil production in 2001-02 with 24.75 million cubic metres, surpassing the previous record in 2000-01 of 24.24 million cubic metres. This record was largely due to new technology, such as horizontal drilling, positive displacement pumps, and three dimensional seismic and enhanced oil recovery, such as CO_2 and steam-assisted gravity drainage.

A new all-time record of 1,395 wells was also set for drilling of natural gas wells in 2001-02, exceeding the previous record of 1,209 wells in 2000-01.

The department developed a comprehensive orphan program to address the liability for abandonment and reclamation of oil and gas wells and facilities. An industry-government committee recommended various amendments to *The Oil and Gas Conservation Act* to provide the necessary legal framework for a comprehensive orphan program in Saskatchewan. The department amended *The Oil and Gas Conservation Act* in 2001-02, and plans to amend regulations in 2002-03. Under the expanded orphan program, the department will be licensing all existing oil and gas facilities in the province.

Energy and Mines participated in a review of oil and gas regulatory approval processes conducted by the Business Services Improvement Branch (of the Department of Economic and Co-operative Development). The objective of the exercise was to improve the ability of government to respond to various industry exploration and development initiatives.

Several oilfield operating guidelines were either updated or introduced during the year.

Energy and Mines, along with several other departments, assisted the RM of Maple Creek in reviewing environmentally sensitive areas within the Cypress Hills to determine lands that should be excluded from oil and gas development.

A new compliance enforcement system was introduced to improve the timeliness and accuracy of reporting oil and gas production and disposition data.

Amendments were made to Part III of *The Freehold Oil and Gas Production Tax Act, 1995* in 2001-02. The department plans to develop regulations in 2002-03 that will contain the tax system applied to crude oil recovered from oil and gas field facilities such as water disposal/injection facilities, cavern facilities and waste processing facilities.

Work continued on identifying the competitive and investment issues affecting the attractiveness of maintaining and expanding the oil and gas industry in the province.

The department continued to work with the mining industry to identify a number of tax and development issues that impact the competitiveness of the industry.

The department introduced a new royalty structure for uranium effective January 1, 2002. The new structure benefits the industry by being administratively simpler while continuing to collect about the same level of royalties as the previous system.

Work continued on trying to reduce overlap and duplication of uranium mining and milling regulations between the federal and provincial governments that add to the cost of operating these facilities in Saskatchewan.

The Mineral Disposition Amendment Regulations were amended in December 2001. The amendments reduced the fee structure for mineral permit dispositions, introduced changes to promote the timely exploration of Crown mineral lands, and established a new, simplified royalty system for uranium.

The Mineral Exploration Tax Credit Regulations were introduced in 2001-02 as part of the Mineral Exploration Strategy. The three-year program offers a 10 per cent non-refundable tax credit for grassroots mineral exploration within Saskatchewan that is funded by flow-through shares.

In preparation for enhanced geoscience research on the sedimentary strata of southern Saskatchewan, renovations began on the Subsurface Geological Laboratory to create offices for new staff. Recruitment for new staff began but was delayed by the hiring freeze in March 2002.

Industry geoscience needs forums were held in Regina and Calgary. A Southern Saskatchewan Geological Resources Advisory Committee was also established to help develop long-term geoscience research plans that will maximize usefulness to industry.

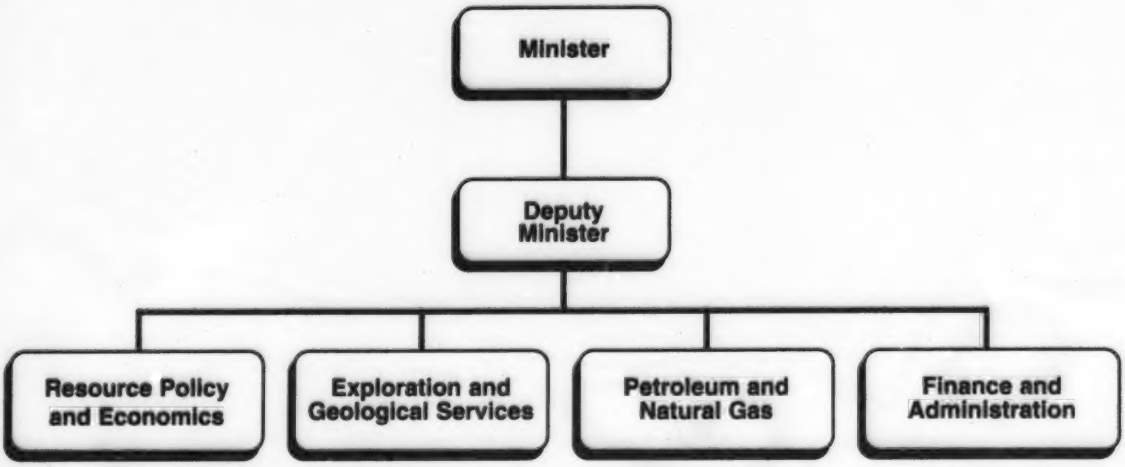
Department staff initiated the Saskatchewan Mineral Exploration Government Advisory Committee (SMEGAC) to provide a consolidated process for consultation between the mineral exploration industry and Saskatchewan government regulators and to develop practical and efficient environmental guidelines and permitting processes for mineral exploration activities.

The department contributed to developing the Government-On-Line map server that will host the Geographic Information System (G.I.S.) Geological Atlas and Mineral Disposition maps. The map server enhances client service by making more information continually and readily available. The department continues to work with the Information Technology Office and Information Services Corporation of Saskatchewan to make more of the department's information available online in a G.I.S. format.

The department produced seven maps of Lower Paleozoic formations, part of a Regional Subsurface Mapping Series, to assist the petroleum industry in the exploration for oil and gas.

In the Northern Geological Survey Branch, five large partnered geoscience research projects were in progress. Two projects entailed geological mapping in the northernmost part of Saskatchewan. The third focused on developing an improved understanding of the context of uranium mineralization in the Athabasca Basin to maintain its pre-eminent exploration attractiveness. The fourth involved the development of new exploration criteria to aid in the identification of deeper, undiscovered ore bodies in the Creighton-Flin Flon mining camp. The fifth project focused on improving understanding of the context of the diamondiferous kimberlites of central Saskatchewan.

Department Organization Chart by Function



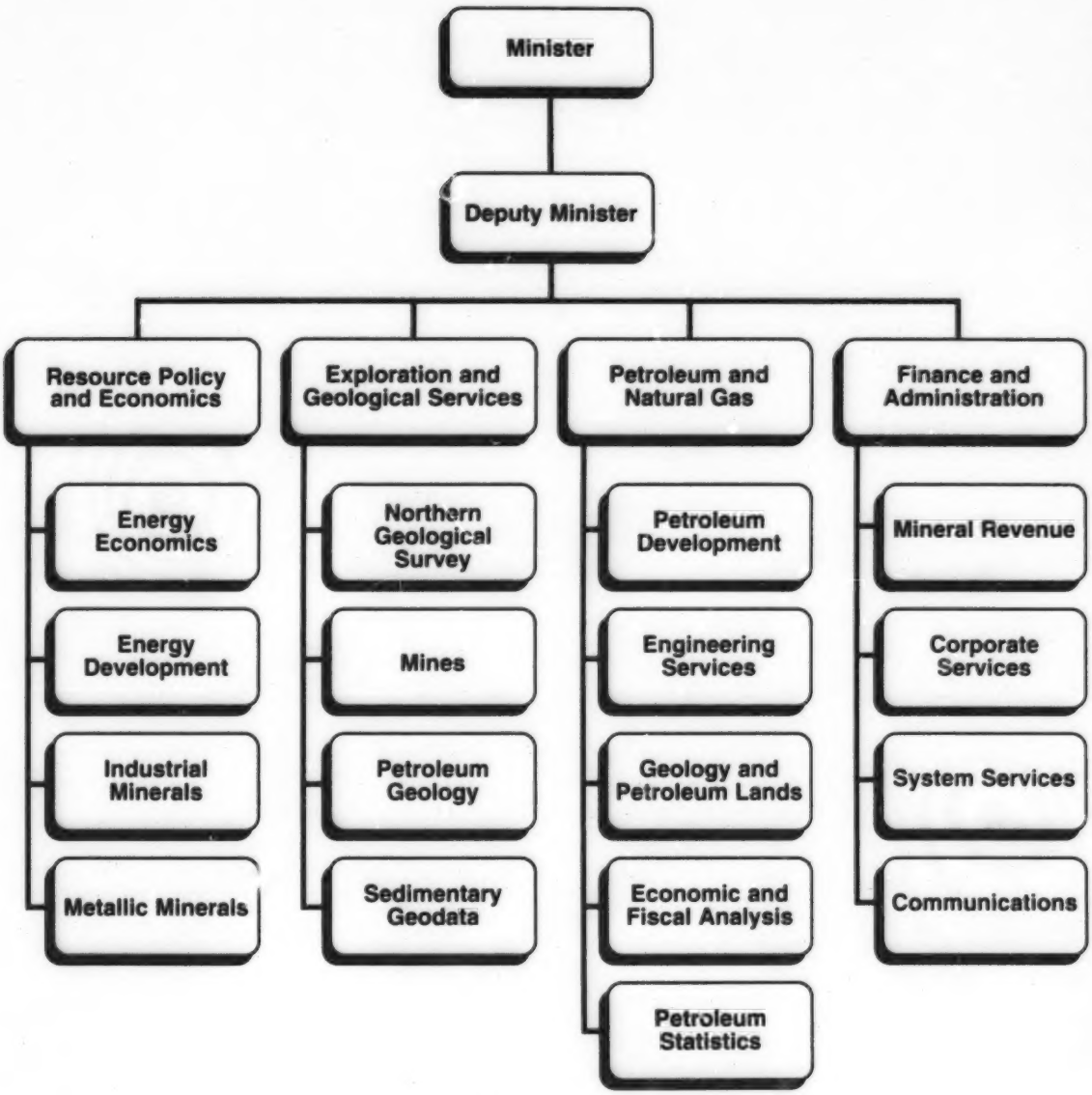
- Resource Development Policy
- Energy Policy
- Energy Management
- Coal, Industrial and Metallic Minerals Fiscal Systems
- Climate Change Policy and Initiatives

- Geoscience Programs
- Resource Assessment and Statistics
- Crown Mineral Rights
- Technical Reports and Map Production
- Core Laboratories
- Well Information System and Assessment Reports

- Oil and Gas Fiscal Systems
- Oil and Gas Environmental and Safety Standards
- Oil and Gas Conservation
- Seismic and Well Licences
- Crown Oil and Gas Rights
- Oil and Gas Production and Disposition Data
- Oil and Gas Reservoirs
- Oil Forecasting

- Human Resources
- Administration and Financial Services
- Communications and Publications
- Treaty Land Entitlement
- Mineral Rights Ownership Records
- Revenue Collection
- Information Technology
- Accommodation

Department Organization Chart



Resource Development

The resource development program is designed to encourage the discovery and development of energy and mineral resources in Saskatchewan. Resource development is the largest and highest priority activity the department carries out. The program involves the following activities:

- conducting field projects including regional geological mapping and site-specific studies of mineral deposits. These investigations assist the mineral industry in the search for new mineral deposits.
- maintaining and updating data files, converting data into geographic information system (GIS) compatible formats, and the use of digital technology for map production.
- extracting geological information submitted for newly drilled oil and gas wells and adding the information to the department's computerized well information system. The data is used to improve knowledge of Saskatchewan's geology and to promote areas and geological formations likely to contain economic accumulations of petroleum and natural gas.
- conducting subsurface geological mapping and related studies to help the oil and gas industry explore for new oil and natural gas fields.
- cataloguing and storing drilling core and samples of drill cuttings for analysis by industry and research geologists to guide exploration and investment decisions.
- evaluating oil and gas reservoirs and wells to determine reserves for the purpose of optimizing development and to guide policy decisions on energy supply and demand.
- selling Crown oil and gas rights for exploration and development of energy resources.
- selling Crown mineral rights for exploration and development of mineral resources.

Without continued investment in exploration and development, resource production would decline and along with it the economic benefits of this resource development in terms of jobs, income and government revenues.

Resource development is strongly affected by commodity prices and worldwide supply and demand factors. As such, there are constraints on the ability of the government to achieve a particular outcome.

1. Geoscience Program

a) Northern Geoscience

The northern geoscience program provides information through field projects including regional geological mapping and site-specific studies of mineral deposits. These investigations assist the mineral industry in the search for new mineral deposits in northern Saskatchewan. They are also required in land-use planning to ensure that high mineral potential lands remain available for exploration while facilitating the establishment of representative ecological areas and parks. Where possible, collaborative research programs are undertaken with the Geological Survey of Canada (GSC) and partnered with the National Sciences and Engineering Research Council (NSERC) supported university research.

Major Activities and Results:

- Completed a large geological mapping program undertaken in the Phelps Lake area in the northeast part of the province building on the results of a major airborne geophysical survey last year. Also completed additional geological mapping in the Uranium City area. Both projects are in partnership with the Geological Survey of Canada through its Targeted Geoscience Initiative program. This work will help in evaluating mineral potential and aid in evaluation of three large Representative Areas Network (RAN) sites.
- Completed the second year of work on the EXTECH IV Athabasca Uranium Multidisciplinary Study, a multidisciplinary investigation of the Athabasca Basin and the context of its uranium deposits. The purpose of this work is to develop new exploration technologies to maintain the Athabasca Basin as the most attractive place in the world to explore for uranium, thereby sustaining the development of this mining camp and enhancing northern employment opportunities.

In addition to the department, other funding partners include the Geological Survey of Canada, Alberta Geological Survey, COGEMA Resources Inc. and Cameco Corp.

- Began work on a new partnered, multidisciplinary investigation of the factors controlling base metal deposit formation in the Creighton-Flin Flon mining camp. The purpose of this work is to develop new exploration criteria to aid in the identification of deeper, undiscovered ore bodies within the area. In addition to the department, other partners include the Geological Survey of Canada, Manitoba Geological Survey and Laurentian University.

b) Southern Geoscience

The southern geoscience program focuses on research, mapping and studies on industrial minerals and diamonds in the southern part of the province.

Major Activities and Results:

- Completed the compilation of diamond indicator mineral chemistries from public-sector surveys encompassing some 1,600 sample locations and 27,000 individual analyses and published this information on a searchable database on the department's Web site. This geochemical database is being used by companies and individuals exploring for diamonds in the province.

- Initiated a new partnered, multidisciplinary study to improve understanding of the context of the diamondiferous kimberlites to advance the potential for development of this multibillion-dollar resource. The study involves scientists from the department and the Geological Survey of Canada (GSC) and is partially funded by the GSC's Targeted Geosciences Initiatives program and industry.

- Continued work on a study of Saskatchewan's sodium sulphate deposits. Compiled geochemical data collected over the last several years and began an interpretation of this information. The demonstration that salts exit the mineralized lake systems is a key finding. The project is a co-operative venture between the department, the University of Saskatchewan, the University of Calgary, sodium and potassium sulphate producers and other agencies, and is partially funded by Saskatchewan's Strategic Initiatives Fund.

- Compiled analytical results from the ongoing brine sampling program. Anticipate early publication of results relevant to the mineral potential of deep basinal brines. Earlier work indicated that Saskatchewan's brines contained potentially economic concentrations of bromine, iodine, lithium and magnesium.

c) GIS and Database Development

Database development continued to focus on maintaining and updating existing data files, converting data files into geographic information system (GIS) compatible formats, and on the use of digital technology for map production.

The department continued to collect and catalogue technical data on mineral exploration of the province's resources. The technical information is put into the Saskatchewan Mineral Assessment File, which is an important database for mineral exploration and land-use planning.

Mineral occurrence data is kept in the Saskatchewan Mineral Deposits Index and is used to compile maps that provide an appraisal of mineral resource potential.

Major Activities and Results:

- Made the 2001 Summary of Investigations maps available in both printed and digital format.

- Made available Version 4 of the Geological Atlas of Saskatchewan CD-ROM, which included viewing/query software, containing several geoscience data files linked to the Geological Map of Saskatchewan in GIS format. Updated and new data files will be added to the CD-ROM for annual release.

- Co-ordinated GIS development and digital data warehouse for EXTECH IV Athabasca Uranium Project.

- Converted the Saskatchewan Mineral Assessment File into GIS format. The database is available, in a searchable format, on the department Web site and as a CD-ROM.

- Participated on federal-provincial committees looking at implementing a national Internet-based network to access geoscience data from federal and provincial agencies.

- Contributed provincial government online program funds to the development of an Internet Map Server to allow the display and retrieval of department geoscience data and maps.

- Made the Kimberlite Indicator Mineral Surveys database accessible on the department's Web site. Recorded more than 27,000 microprobe analyses of heavy mineral grains from over 1,600 discrete sampling sites in this database, which was compiled from 10 public-sector surveys.

Impacts:

- Continued introduction of digital technology that will allow immediate and global access to the department's geoscience database. The availability of digital data allows industry clients to more easily incorporate department data into their corporate databases.

- Incorporated 89 new assessment files into the Saskatchewan Mineral Assessment File, bringing the total number of records on hand to 8,837.

- Added 11 records to the Saskatchewan Mineral Deposits Index, bringing the total records to 2,892.

- Completed mineral potential assessments that have allowed for identification of areas of higher mineral potential as part of the land-use planning process. This is extremely important to ensure that restricted land-use candidate areas do not conflict unnecessarily with resource-rich regions.

d) Mineral Resource Assessment Program

A mineral resource assessment (MRA) program was initiated in 1996 in response to land-use planning requirements in the province. The assessments of mineral potential are conducted with a structured qualitative methodology that employs defined criteria. The methodology was evaluated and approved by the mineral and oil and gas industries.

A Memorandum of Understanding (MOU) with Saskatchewan Environment formalized the use of mineral resource assessments and industry review of land-use proposals as part of the planning process.

A number of 1:250,000 scale resource assessments were carried out in 2001-02 in response to Representative Areas Network (RAN) site proposals and to regional land-use plans being developed in many areas of the province. To date MRAs were completed at this scale for most of the National Topographic Series (NTS) map sheets in the province, except for a few map sheets in the south-central part.

Major Activities and Results:

- No new RAN sites were formally designated in 2001-02. Following discussions with Saskatchewan Environment and industry representatives, however, Energy and Mines approved two sites in the Dore Lake–Lac La Plonge area.

- Discussions continue on the following areas:
  1) three large site proposals in the far north;
  2) two site proposals, one large and one of moderate size, in the Foster Lakes area;
  3) a large proposal south of Cree Lake;
  4) a large site proposal in the Firebag Lake area; and
  5) a small site proposal in the Fort à la Corne area.

  The two proposals in the Foster Lakes area were reviewed by industry. The public will review most of these RAN site proposals through regional land-use planning processes. The use of MRAs, the MOU, and active industry involvement in the process have enhanced the ability of the province to achieve ecological objectives without compromising regions of known significant mineral potential.

- The department actively participates in numerous regional land-use planning processes, mainly in the central and northern portions of the province. The MRAs provide useful information on the known and potential mineral resources to these processes.

Impacts:

Completion of mineral resource assessments has allowed the identification of areas of significant mineral potential as part of the land-use planning process in the province. This is extremely important to ensure that those candidate land-use areas, with proposed restrictions on exploration and development activities, do not conflict with areas of significant mineral potential or known resources.

e) Sedimentary Geology Data and Studies

The department extracts geological information submitted for newly drilled wells under *The Oil and Gas Conservation Regulations, 1985* and adds the information into the department's computerized Well Information System (WIS). Staff enhance the value of this data through their research and interpretation that assist and encourage exploration activity by the oil and gas industry. The data is used to improve knowledge of Saskatchewan's subsurface geology and to promote areas and geological formations likely to contain economic accumulations of petroleum. Due to high levels of oil and gas drilling activity during the 1990s through to present, the department was unable to keep its well information system up to date. The backlog continues to be reduced.

Major Activities and Results:

- Increased the department's geological information in order to help companies develop new exploration and development strategies and new drill targets.
- Provided extensive support, including contributed papers and technical editing, to preparing Volume 1 of the Summary of Investigations 2001. This publication includes 15 papers that highlight research on sedimentary strata in Saskatchewan.
- Prepared the Mannville Report as a digital product to advanced stages. The report is expected to be highly useful to industry interested in developing new models for exploration, especially in west-central Saskatchewan.
- Continued major research work, in collaboration with the Petroleum Technology Research Centre, PanCanadian Petroleum Ltd. and a diverse group of international geoscience agencies, to monitor what happens to carbon dioxide after it is injected into the Weyburn oilfield as part of an enhanced oil recovery program. The department plays a lead role in the geological component of this project, which will help establish international standards for the sequestration of carbon dioxide in carbonate rocks. Collaborative international research continues to provide new insights into the potential for further discoveries of shallow gas in the southern part of the province.
- Hosted the second annual meeting of the Western Canada Sedimentary Basin Committee, composed of provincial and federal geoscience agencies active in the basin. The committee reviews geoscience work in progress to ensure inter-agency collaboration and co-operation are maximized.
- Dropped the department's backlog of well data to enter into the Well Information System by 30 per cent to 4,899 wells due to a decrease in drilling activity as a result of lower oil and gas prices, as well as an increase in data entry staff. Continued to take steps to improve the timeliness of the department's data submissions by industry.
- Processed stratigraphic information from 2,432 wells and added them to the Well Information System. The backlog of stratigraphic data to process now stands at 559 wells, which is within the "background" range of 300 to 600 unprocessed wells at any given time.
- Formulated five- and 10-year plans as part of a Southern Saskatchewan Subsurface Mapping Strategy. As part of this process, the department held three industry-needs forums — two in Regina and one in Calgary.
- Established a Southern Saskatchewan Geological Resources Advisory Committee reporting directly to the Deputy Minister to help ensure the Subsurface Mapping Strategy carries out work that is of most immediate use to industry.
- Dropped seismic activity by approximately 20 per cent, with approval of 268 seismic plans comprising 16,700 approved kilometres and 9,700 completed.
- Accessed well files in approximately the same quantities as the previous year: 35,000 times by staff, 55,000 times by industry, and 10,000 times by other government personnel.

f) Core and Sample Storage and Examination Facilities

The Precambrian Geological Laboratory in La Ronge houses both the offices of the resident geologists and the mineralized core collection, a valuable database for mineral explorers and geological research workers. The department took interim measures to deal with the space shortage in the La Ronge facility.

The resident geologists in La Ronge and Creighton monitor the mineral exploration industry in northern Saskatchewan and provide up-to-date information on exploration and mining activities and opportunities. The La Ronge office maintains files on current mineral claims, topographic maps, air photos, geological maps and reports, and assessment work submissions. The Creighton office has current claim maps.

The Subsurface Geological Laboratory in Regina catalogues and stores cores and samples of drill cuttings submitted under *The Oil and Gas Conservation Regulations, 1985*, and houses the offices of the Petroleum Geology staff. The cores and samples are available for examination or analysis by industry and research geologists.

Major Activities and Results:

- Received new cores from 179 wells totalling 2,989 boxes of core. This brings the total number of boxes in the library to 342,579.
- Processed new samples of drill cuttings from 729 wells, bringing the total number of vials in storage to 3,082,391.
- Geologists from 198 different organizations spent 893 person-days examining geological material stored in the Regina laboratory. Dispatched 4,615 boxes for outside analysis at the request of customers.
- Renovated the office and core examination areas of the Regina laboratory, and replaced the roof of the core-storage warehouse, as part of the department's commitment to upgrade its services to the hydrocarbon and potash industries.

g) Other Geological Services

The department edited, produced and sold geoscientific reports and maps to industry and the general public. The department moved to a more cost-effective print-on-demand process for some of its products. Many products are now in a totally digital format and some are posted on the department's Web site.

The Williston Basin Horizontal Well and Petroleum Conference is the major forum for oil and gas agencies to present results from their current projects. Organizations presenting information included: Saskatchewan Energy and Mines, the Geological Survey of Canada, the United States Geological Survey, numerous universities and colleges within Canada and the United States, the Canadian Museum of Nature and the Royal Saskatchewan Museum, and exploration companies and consultants within Canada and the United States. The Summary of Investigations 2001, Volume 1 contained 15 papers outlining these projects.

The annual Saskatchewan Geological Survey Open House is the major forum for geoscience agencies and the mining and mineral exploration industry to present results from their current projects and research to each other and the general public.

Organizations presenting information included Saskatchewan Energy and Mines; the Geological Survey of Canada; the Saskatchewan Research Council; the Manitoba Geological Survey; geology departments of the Universities of Saskatchewan, Regina, Alberta, Calgary and Massachusetts, Massachusetts Institute of Technology and Laurentian University; and the mining and mineral exploration industries. The Summary of Investigations 2001, Volume 2, contained 38 papers summarizing this research. For the first time, the Summary was available in a fully digital, colour format on two CD-ROMs and was posted to the department's Web site for full public accessibility.

h) Public Information and Education

The objective of the public information program is to promote awareness of Saskatchewan's mineral and energy industry and our significant resource potential among the general public and to the mining and exploration industry outside the province. This is achieved by responding to specific inquiries, producing and distributing educational materials, developing and exhibiting promotional displays for major exhibitions, and publishing articles in trade magazines and newspapers.

Major Activities and Results:

- Exhibited displays, illustrating Saskatchewan's mineral resources and potential, and activities of the department and the mineral industry, at the Prospectors and Developers Association of Canada (PDAC) convention in Toronto, the Cordilleran Roundup conference in Vancouver and at the Mining Week display in the Saskatchewan Science Centre in Regina.

- Assisted the Saskatchewan Mining Association in conducting a six-day teachers' mine tour to show teachers first-hand all types of mining activity in the province.

- Played a lead role in the production of the Geological Highway Map of Saskatchewan.

2. Oil and Gas Reservoirs

The oil and gas reservoir assessment program evaluates oil and gas reservoirs, wells and projects to determine reserves for the purposes of encouraging and facilitating resource development. Reservoirs and wells are also assessed when evaluating industry proposals for horizontal drilling, waterfloods, enhanced recovery, waste water disposal wells, off-target wells, commingling, unitization and pipelines.

The reserve data is used extensively by the government in making policy decisions on energy supply and demand. This information is also used by the oil and gas industry in making investment decisions.

Industry applications are assessed promptly to ensure investments are not delayed.

The mandate for this program comes from:

- *The Oil and Gas Conservation Act*;

- *The Crown Minerals Act*; and

- *The Pipelines Act, 1998*; and their respective regulations.

Major Activities and Results:

- Reviewed and published information on oil and gas reserves. Initial oil reserves increased by 37 million cubic metres and initial gas reserves by 14.2 billion cubic metres. Remaining reserve estimates for 2001 (as shown in Figures 1 and 2) show an increase for both oil and natural gas.

- Reviewed more than 1,100 applications for various projects such as horizontal drilling, waterfloods, enhanced recovery, waste water disposal wells, good production practice, off-target wells, commingling, unitization and pipelines.

- As shown in Figure 3, the approval of industry applications resulted in the drilling of 467 horizontal wells in 2001-02, representing $327 million in investment.

Figure 1- Remaining Oil Reserves

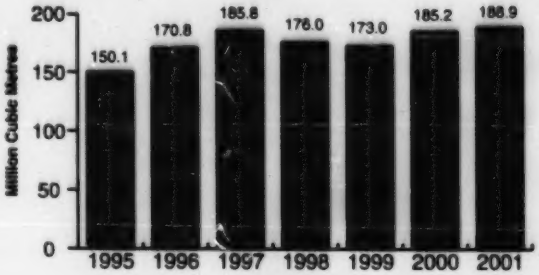


Figure 2 - Remaining Gas Reserves

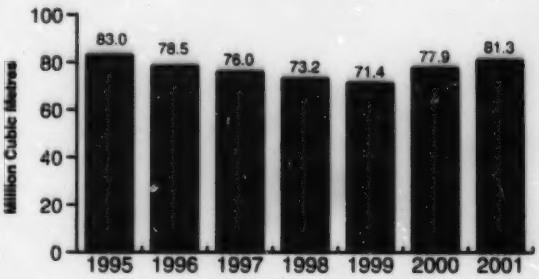
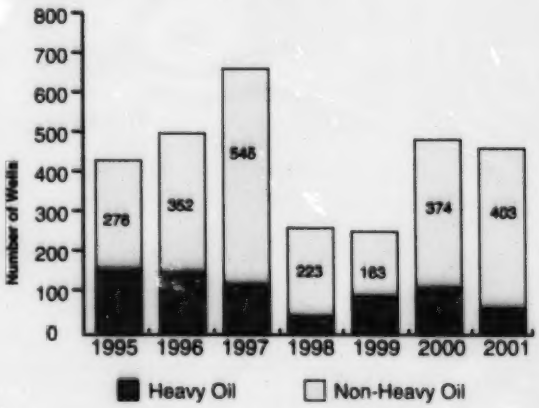


Figure 3 - Horizontal Wells



- The 66 applications for new or expanded waterfloods and enhanced oil recovery projects resulted in significant investments in new facilities with great potential for increases in oil production. The 94 waste water disposal well application approvals allowed for more efficient and economical operation of oil facilities in an environmentally responsible manner.

- Issued 277 pipeline licences in 2001-02 providing for new investments and more efficient transportation of oil and natural gas.

3. Sale of Crown Oil and Gas Rights

The province develops oil and gas mineral rights by selling the use of those rights to industry for exploration and development. The disposition of Crown oil and gas rights to industry is in the form of special agreements, special exploratory permits, exploration licences, permits and leases. Specific lands requested by oil and gas companies are advertised in six sales held during the year. The lands are evaluated by department geological staff to determine fair market value. The successful bidders in the sale are awarded the rights, which permit companies to explore for and to produce oil and gas.

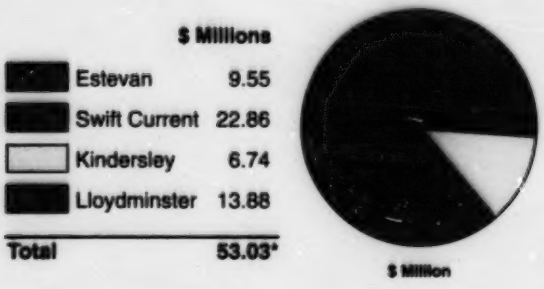
The mandate for this program comes from:

- *The Crown Minerals Act*; and
- *The Petroleum and Natural Gas Regulations, 1969* that provide the authority for disposition of Crown oil and gas rights by the sale process.

Major Activities and Results:

- Held six sales in 2001-02 that resulted in revenues of $53.03 million*. Revenue derived from the sale of petroleum and natural gas rights is shown in Figure 4.

Figure 4 - Revenue Received from Sales of Crown Petroleum and Natural Gas Rights 2001-02



* Excludes negotiated leases and lease conversions occurring throughout the year accounting for about $550,000 in bonus bid revenues.

- Disposed of 414,036 hectares in mineral rights during the fiscal year. This consisted of one special exploratory permit containing 10,930 hectares, 34 exploration licences covering 112,252 hectares, and 1,494 lease parcels containing 290,854 hectares.
- Lands sold in natural gas-prone areas of the province were clearly a highlight of the year. Sold 144,884 hectares, bringing in bonus bid revenues of $17.9 million or 34 per cent of sale revenue. This is well up from the five-year average of 18 per cent.
- Embarked on developing a new geological, computer-based mapping program, named the Phoenix Project, to replace 125 geological maps used in the evaluation of Crown oil and gas rights.

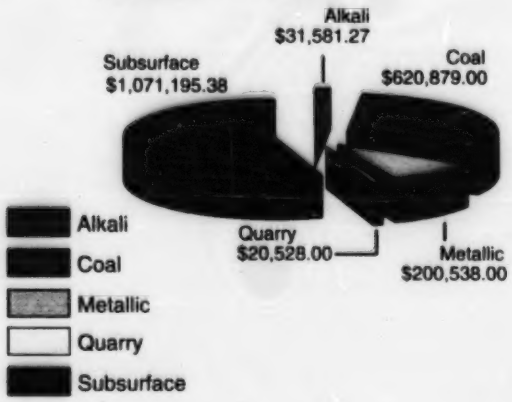
4. Sale and Rental of Crown Mineral Rights

The province develops Crown minerals by making available the use of Crown mineral rights to industry for exploration and development. Crown minerals are acquired in the form of licence, permits, claims, leases and special agreements. Undisposed Crown land may be applied for at any time; Crown mineral lands that were previously disposed but no longer in good standing are published on a monthly lapse list prior to being made available for application. Priority between applications for Crown mineral dispositions is determined by the date and time of a complete application.

The mandate for this program comes from:

- *The Crown Minerals Act*;
- *The Mineral Disposition Regulations, 1986*;
- *The Coal Regulations, 1988*;
- *The Subsurface Disposition Regulations, 1960*;
- *The Quarrying Regulations, 1957*; and
- *The Alkali Regulations*.

Figure 5 - 2001 Mineral Tenure Revenue
(Acquisition and Rental Fees)



Major Activities and Results:

- *Generated $1.95 million in revenue from the* acquisition and rental of Crown mineral rights in 2001-02. The contribution of the various mineral commodities is shown in Figure 5.

- Industry acquired mineral rights for 449,727 hectares during the fiscal year. The majority of Crown mineral rights were issued under *The Mineral Disposition Regulations, 1986*, with 343,288 hectares acquired for diamond-related exploration.

- While representing the largest amount of land under disposition, the lower revenue related to metallic minerals reflect the 50 per cent fee reduction implemented over the past two years to encourage exploration as part of the Mineral Exploration Strategy. Potash lease dispositions provided the majority of the mineral-derived revenue, followed by coal leases.

Resource Policy

Resource policy activity is aimed at maintaining the competitiveness of Saskatchewan's fiscal and regulatory systems in order to encourage and sustain a viable and growing energy and mineral industry. It also ensures a fair return to the province in terms of jobs, economic activity and government revenues to fund programs and services.

The department designs and implements policies and programs to support the development of new technology that will increase the production of Saskatchewan's energy resources. Active participation in federal-provincial forums can ensure that the province's interests are considered and measures taken to mitigate against negative impacts of domestic or international trade agreements and/or federal policy on the energy and mineral sectors in Saskatchewan.

Resource policy encompasses the following functions:

- analyse and provide recommendations on legislative, regulatory and policy changes in response to changing trends and emerging issues to ensure continued responsible development of the province's energy and mineral resources;
- liaise with industry on emerging issues of mutual concern;
- represent provincial interests in federal-provincial negotiations on domestic and international issues such as federal tax and regulatory policy, and domestic and international trade agreements that impact on the oil, gas and mineral resource sectors; and
- design, implement and review royalty and tax systems for oil, gas, potash, uranium, gold, base and precious metals.

The mandate for this program comes from:

- *The Mineral Resources Act, 1985* that provides authority with respect to the exploration, development, management and conservation of mineral resources;
- *The Crown Minerals Act* and *The Freehold Oil and Gas Production Tax Act* that provide the authority for regulations respecting royalties and taxes for oil and gas;
- *The Oil and Gas Conservation Act* that provides the authority to implement natural gas policy; and
- *The Department of Energy and Mines Act* that provides authority with respect to the development, management and conservation of energy.

1. Resource Development Policy

Major Activities and Results:

- Considered a number of land policy issues relating to potash units, permits and leases.
- Reviewed potash market development and research programs to ensure the programs continued to meet their intended objectives. The programs focus on expanding markets in southeast Asia, particularly China, and on environmental concerns, such as waste management.
- Supported three major initiatives to support the development and adoption of new technology to increase the production of Saskatchewan oil and natural gas resources and improve the economics of the oil industry:
  - The department is a founding partner and a major financial supporter of the Petroleum Technology Research Centre (PTRC), which brings together governments, industry, and university and applied researchers to develop the next generation of oil production technology.
  - The department approved four applications from the oil industry for the Saskatchewan Petroleum Research Incentive, and has approved 11 projects to date. The Incentive provided nearly $7 million in royalty tax credits to projects that invested nearly $40 million in the development of new technology for the oil industry. The Incentive will continue until March 31, 2003, and will provide a total of up to $17.5 million of royalty/tax incentives to encourage industry to develop new technology for the oil and gas sector. The application of new technologies in the oil and gas sector will generate significant economic benefits for the province.

- The department organized the ninth annual Williston Basin Horizontal Well Workshop in Regina in May 2001 in co-operation with the North Dakota Geological Survey, to promote opportunities for oil field development in the Williston Basin. Nearly 400 oil industry participants attended. The workshop generally alternates between Regina and Bismarck, North Dakota, which will host the next workshop in May 2002.

- Developed amendments to *The Mineral Resources Act, 1985* and associated regulations to implement the Mineral Exploration Tax Credit introduced the previous year.

- Represented the government on the Intergovernmental Working Group on the Mineral Industry and the Subcommittee on Aboriginal Participation in Mining.

- Co-ordinated a process to resolve issues surrounding the drilling of oil and gas wells near potash mines.

- Participated, through membership in the Northern Mines Monitoring Secretariat, in providing support to the activities of the Environmental Quality Committees in monitoring uranium mine operations in northern Saskatchewan.

- Continued to work with Saskatchewan Environment on mine reclamation and decommissioning issues.

- Prepared forecasts of production, sales, price, revenue, employment and investment for coal, natural gas, potash, uranium and sodium sulphate. These forecasts assisted the government in budget planning, economic forecasting and planning, and negotiating federal-provincial equalization.

- Worked with the federal government on a value-added initiative for minerals.

2. Mineral Royalty and Tax Policy

The industrial and metallic mineral royalty and tax policy program includes the monitoring and managing of royalty and tax systems for uranium, gold and base metals, potash, coal and other industrial minerals. The objective of the royalty and tax systems is to ensure a fair economic return to the province from resource development, while maintaining a healthy investment climate to encourage industry to explore and develop the province's resources.

The mineral royalty and tax systems are reviewed in response to changes in markets, prices, production and capital costs, and regulations and policy in other jurisdictions. Analysis and recommendations on changes to royalty systems, in response to these conditions, are provided to the government for consideration. Consultation with industry is a key consideration in developing changes to royalty and tax systems.

The mandate for the program comes from:

- *The Mineral Taxation Act, 1983* that provides the authority to tax freehold minerals in the province; and

- *The Crown Minerals Act* that provides the authority to collect royalties on Crown minerals in the province.

Major Activities and Results:

- An industry/department working group continued to investigate a number of tax issues including the impact of provincial taxation on the rate of return for capital investment in the potash industry.

- The department and the Saskatchewan Mining Association co-chair a committee that is examining a broad range of taxation issues that impact the mining industry. The committee is made up of representatives from the mining industry, the Department of Finance and the Department of Energy and Mines.

- Introduced a new uranium royalty system following extensive consultations with the uranium mining industry. The new system is revenue-based rather than profit-based as was the former royalty system. Having a revenue-based system that uses corporate reporting versus individual mine reporting will significantly reduce the administrative burden that the royalty system places on the uranium industry. While reducing the administrative burden and increasing the competitiveness of the industry, the new royalty system will continue to collect approximately the same level of revenues from the industry.

- Reviewed and approved industry proposals under the potash market development and research and development programs.

- Identified, reviewed and resolved numerous issues arising from the administration of the royalty and tax systems.

3. Oil and Gas Royalty and Tax Policy

The oil and gas royalty and tax policy program is responsible for the valuation of royalty/tax systems by reviewing, developing and implementing Crown royalty and freehold production tax structures and incentives applicable to crude oil and natural gas production in Saskatchewan.

The program ensures:

- proper systems are in place in order for the province to receive an appropriate share of crude oil and natural gas revenues from producing companies;
- reasonable levels of exploration and development activity in the province; and
- maximum economic recovery of crude oil and natural gas from established reservoirs.

The royalty and tax structures and incentives are reviewed from time to time as technology and economic conditions change. Consultation with industry is a key component of all reviews.

Under the program, the impacts of short- and long-term world price movements and quality differential adjustments, provincial royalty and tax situations, federal income tax provisions, and technological changes related to the oil and gas industry in Saskatchewan are evaluated. Total impact is measured by projecting the trends in drilling activity, production, revenue, employment and investment.

This information is required for internal government economic and budget planning purposes, for analysis of royalty and freehold production tax options, and for response to a number of inquiries from energy boards, municipalities, and oil producing, refining and transporting companies.

The mandate of the program comes from:

- *The Crown Minerals Act* and associated regulations that provide authority to levy a royalty on oil and natural gas determined to be produced from Crown lands; and
- *The Freehold Oil and Gas Production Tax Act* and associated regulations that provide authority to levy a production tax on oil and natural gas determined to be produced from non-Crown lands and on oil where no determination can be made.

Major Activities and Results:

- Amended *The Crown Oil and Gas Royalty Regulations* and *The Freehold Oil and Gas Production Tax Regulations* that introduced an enhanced oil recovery royalty/tax regime for future carbon dioxide (CO_2) injection projects implemented in the province. In conjunction with these amendments, developed a number of amendments of a housekeeping nature to provide more clarification and reduce administration for the oil and gas industry and the government.
- Reviewed 10 applications and approved approximately 30 wells under the royalty/tax program for high water-cut oil wells. This program is designed to extend the producing lives and improve the recovery rates of oil wells producing fluid containing more than 95 per cent water.
- Initiated a review of crude oil and natural gas competitive issues. Identified a number of issues affecting various areas of government that required further analysis.
- Reviewed approximately 3,500 new oil and gas well licences to determine the proper Crown royalty and freehold production tax structure and incentive volume for each well.
- Determined average oil and gas prices for every month and made adjustments to the basic Crown royalty and freehold production tax structures for both oil and gas production in accordance to established price sensitive policies.
- Prepared numerous forecasts of production, price, revenue, employment and investment that measured the economic and financial impact of the oil industry.

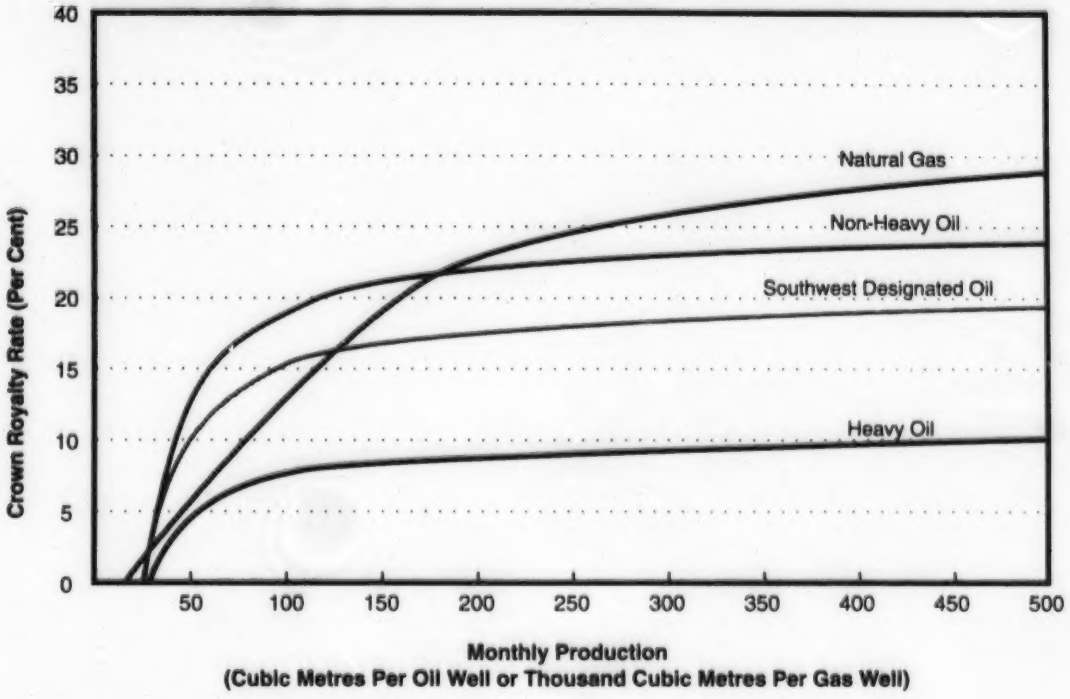
Impacts:

- Reasonable crude oil and natural gas price levels maintained a good level of drilling activity in Saskatchewan. In 2001, 3,326 oil and gas wells were drilled compared to 3,605 in the previous year. The 2001 gas well drilling total of 1,395 was a new record, surpassing the previous record of 1,209 established the previous year.
- In 2001-02, the average royalty/tax rate was approximately 13.6 per cent for oil and 14.6 per cent for natural gas, resulting in an overall provincial average of approximately 13.8 per cent.

- Figure 6 illustrates the January 2002 Crown royalty curves for newly drilled vertical oil wells (heavy, southwest designated non-heavy and other non-heavy) and gas wells. The curves, which are adjusted every month in accordance with established price-sensitive policies, apply on an individual well basis and after each well has produced its up-front incentive volume.

The following table entitled "New Oil and Gas Wells Drilled in 2001" provides a breakdown of drilling.

Figure 6 - Crown Royalty Curve



New Oil and Gas Wells Drilled in 2001

Well Category	Producing	Abandoned	Service	Total
Oil:				
Conventional:				
Vertical	1,216	151	68*	1,435
Horizontal	434	3	25*	462
Total	**1,650**	**154**	**93**	**1,897**
Enhanced Oil Recovery (EOR[1])				
Vertical	29	0	*	29
Horizontal	5	0	*	5
Total	**34**	**0**		**34**
Total Oil Wells	**1,684**	**154**	**93**	**1,931**
Gas:				
Total (all vertical)	**1,356**	**39**	**0**	**1,395**
Provincial Total	**3,040**	**193**	**93**	**3,326**

* The split of total service oil wells into the conventional and EOR oil well categories is not available.

[1] EOR oil means oil recovered due to the implementation of enhanced oil recovery projects. These projects include firefloods, steamfloods and CO_2 floods but exclude waterfloods.

Energy Planning and Development

The energy planning and development function involves the establishment and implementation of policies and programs to encourage the responsible utilization of energy and the efficient and effective delivery of energy services in Saskatchewan. Policies and programs are developed to promote the efficient use of energy by Saskatchewan consumers and improve the competitiveness of businesses through improved energy management practices. Policies are also developed to respond to changing circumstances in North America towards a more open and competitive market for the delivery of electricity and natural gas services to customers.

The department monitors developments in other jurisdictions that have the potential to affect the production and marketability of our energy resources and the use and delivery of energy and energy services in Saskatchewan. Department officials represent the government in a number of intergovernmental initiatives examining issues related to responsible development of our energy resources.

Saskatchewan Energy and Mines and Saskatchewan Environment are jointly responsible for development of Saskatchewan's policy regarding global climate change.

The mandate for this program comes from:

- *The Department of Energy and Mines Act* that describes the Minister's authority and responsibility with respect to energy management and provides authority to enter into agreements with other governments; and
- *The Mineral Resources Act, 1985* that provides authority for conservation of mineral resources.

Major Activities and Results:

- Staff was involved in a number of initiatives related to energy conservation, greenhouse gas emissions and global climate change, including:
  - establishment of the Prairie Adaptation Research Collaborative (PARC) at the Regina Research Park next to the University of Regina in co-operation with Natural Resources Canada;
  - establishment of the International Test Centre for Carbon Dioxide Capture at the University of Regina. The test centre is a partnership involving the federal government, the governments of Alberta and Saskatchewan, a number of private companies, utilities and universities in Canada and from other countries;
  - participation in the National Air Issues Co-ordinating Committee (NAICC) and a number of its subcommittees and working groups. The NAICC is responsible for implementing Canada's National Action Plan on Climate Change and for developing a Canadian response to the Kyoto Protocol;
  - initiation of the Energy Conservation, Climate Change and Technology Network at the Saskatchewan Research Council, the University of Saskatchewan and the University of Regina to address climate change issues in the province and to assist in the development of climate change initiatives;
  - formation of an interdepartmental working group of officials to advise on the development of initiatives for the Greenprint for Energy Conservation;
  - support for the extension of the EnerGuide for Houses Program in Saskatchewan into rural areas in co-operation with Sun Ridge Group and Natural Resources Canada;
  - establishment of a Stakeholders Advisory Committee to assist government officials to determine which climate change initiatives should be undertaken within Saskatchewan;
  - participation in a multi-client project being undertaken by the Alberta Research Council to study the feasibility of injecting carbon dioxide into deep underground coal seams to permanently dispose of the carbon dioxide and simultaneously produce natural gas;
  - establishment of Climate Change Saskatchewan in co-operation with Natural Resources Canada to provide Saskatchewan residents with access to credible and reliable climate change information;

- participation in the International Energy Agency's greenhouse gas research and development program;

- provision of a staff member to serve as pilot manager for the Greenhouse Gas Emissions Reduction Trading (GERT) pilot project. The pilot encourages voluntary investment in emission reduction projects and the trading of emissions reductions to provide a model for a possible future national emissions reduction trading system;

- establishment of the International Energy Agency (IEA) Weyburn Carbon Dioxide Monitoring Project to evaluate geologic sequestration of carbon dioxide;

- provision of a toll-free telephone line to provide information on energy conservation, climate change and alternate energy to Saskatchewan residents. Approximately 280 information requests were received and processed; and

- updating provincial climate change initiatives included as part of Canada's National Business Plan 2002 on climate change.

- Represented Saskatchewan's interests in energy sector discussions in the negotiations between Canada and the provinces for an agreement to reduce internal trade barriers within Canada.

- Represented Saskatchewan's interests in the federal-provincial working group on electricity reliability and in several industry meetings on electricity reliability issues.

- Continued to monitor and provide policy advice on the changing circumstances in the North American electricity industry with respect to more open and competitive markets.

- Represented Saskatchewan on a federal-provincial-territorial task force examining the opportunities for harmonizing the regulation of oil and natural gas pipelines in Canada.

- Represented Saskatchewan's interests on a federal-provincial-territorial committee on international energy issues, including discussions related to North American energy markets.

Resource Revenue Collection

The department has a rigorous financial system in place to record production and disposition information, calculate royalties and taxes owing, and issue billings. An appropriate tax audit presence ensures a high degree of compliance by resource companies and additional royalties and taxes for the province.

The revenue collection activity ensures that revenues owed to the province are collected and includes the following specific activities:

- collecting data on the production and disposition of oil, gas, water and associated products from all producing wells in the province;
- calculating oil and gas royalties and taxes owed by more than 2,300 operators and working interest owners and issuing monthly invoices for any discrepancies in the amounts owed;
- auditing royalty returns to ensure that all revenues owed are received;
- maintaining major computer systems to store and analyse oil and gas production and disposition data, calculate royalties and taxes owing, and issue billings to operators and working interest owners;
- calculating and making compensation payments to former mineral rights owners; and
- administering the sale or transfer of Crown mineral rights to the federal government on behalf of Saskatchewan Indian bands under Treaty Land Entitlement and specific claims.

1. Revenue Collection Program

The revenue collection program ensures that non-renewable resource revenues, mineral rights taxes and other fees owing to the province are collected. The revenue collection program also administers mineral land ownership records and ensures that mineral compensation and trust expenditures are made appropriately.

The mandate for this program comes from:

- *The Crown Minerals Act* and associated regulations that prescribe royalties, rentals and fees payable by persons engaged in exploring, developing and producing minerals that are owned by the Crown and prescribes penalties to be applied to late payments;
- *The Freehold Oil and Gas Production Tax Act* and associated regulations that prescribe amounts payable by producers of oil and gas from wells drilled on freehold lands; and
- *The Mineral Taxation Act, 1983* that prescribes base and profit-related payments due from potash producers, production taxes payable on freehold coal, and mineral rights tax payable by taxable mineral owners.

Major Activities and Results:

- Recorded and deposited all cash received on a daily basis. Received revenue totalling $911.5 million. Calculated year-end accruals and applied various revenue accounts in accordance with government accounting practices.
- Completed 70 audits of resource companies during the year resulting in additional Crown revenues of $9.9 million.
- Continued collection activity on delinquent accounts throughout the year.
- Processed surrenders, assignments and transfer documents pertaining to mineral rights to ensure the integrity of the Crown and the freehold mineral ownership records and the mineral rights tax database.
- Held numerous meetings with royalty/tax payers to convey information, answer questions, explain regulatory or policy changes, and seek input on royalty/tax related matters.
- Handled a total of $50,319 in compensation payments to former mineral owners in the 2001-02 fiscal year.

2. Information Technology Services

Information Technology (IT) Services involves developing and maintaining systems, acquiring and maintaining computer hardware and software, contracting for consulting and mainframe services, administering the department's computer network, providing system security, operating a helpdesk, and providing data-entry services.

The department operates a number of major systems on a regular production basis, running on variety of platforms. Changes are made to existing systems or new systems are developed to support legislative changes or to improve operational efficiency. Department staff perform system analysis, development and maintenance functions, and support the client/server environment and network services. Mainframe services are contracted to ISM Canada.

Major Activities and Results:

- Upgraded network server software to Netware 5.2.
- Started implementation of CommunityNet.
- Added the Diamond Indicator and Mineral Assessment databases online.
- Redeveloped the online mineral deposits index (SMDI) database.
- Drafted IT Security Policy.
- Piloted an imaging system for some of the department's paper files.
- Started development of the Mineral Ownership Information System.
- Designed a new architecture to be used in the development of new systems in the client/server environment.
- Updated the department Web site to conform to the government standard, and added the Saskatchewan Mineral Assessment Database search.
- Continued to upgrade desktop hardware.
- Identified need to develop systems to support the Orphan Well Program.

3. Indian Land Claims

The objective of the program is to facilitate the transfer of lands to Indian reserves in Saskatchewan through the implementation of the mineral provisions of Indian land claim settlement agreements. Two types of land claims are:

- Treaty land entitlement (TLE) claims arising from the implementation of Treaty Land Entitlement Agreements between the province, the federal government and various Indian bands; and
- Specific land claims arising from the implementation of Specific Claim Settlement Agreements between the federal government and Saskatchewan Indian bands.

The mandate for this program comes from:

- *The Saskatchewan Natural Resources Transfer Agreement (Treaty Land Entitlement) Act*;
- *The Treaty Land Entitlement Implementation Act*, and subsequent settlement agreements with individual bands; and
- *The Crown Minerals Act.*

Major Activities and Results:

- The department is currently engaged in the transfer and sale of Crown mineral rights to the federal government on behalf of Indian bands in Saskatchewan. This includes:
  - reviewing and approving all Crown mineral selections;
  - determining the level of compensation that may be required by the province for purposes of transferring Crown mineral rights to the federal government; and
  - preparing Orders in Council approving the transfer of the mineral rights to the federal Crown.
- Held information workshops with the Indian bands and the energy and mineral resource industries, interdepartmental meetings to resolve process and policy issues, and monitoring the status of Crown mineral rights subject to Indian land claims.

- Reviewed 220,165 hectares of mineral rights requested by Entitlement Bands in 2001-02. Since inception of TLE agreements in 1992, the department has reviewed a total of 1.8 million hectares of mineral land selections.

- Cabinet approved a total of 25,571 hectares of provincial Crown mineral rights for transfer to the federal government to become new reserve lands during the 2001-02 fiscal year. The total number of hectares of Crown minerals transferred under these agreements as of March 31, 2002, was 183,696.

4. Oil and Gas Production and Disposition Data

The oil and gas data program collects data related to the production and disposition of crude oil, natural gas, water and associated products from all producing wells in the province.

The database is used in the collection of royalties and taxes, forecasting, monitoring and evaluating Crown lands under disposition. It is also used to analyse and develop resource management policy and fiscal regimes and to establish, monitor and enforce oil and gas conservation, and environmental and safety standards.

The oil and gas industry relies extensively on the database for production information to facilitate its exploration and development activities in the province. Data is also used by consulting firms, federal and provincial government agencies, universities and the general public.

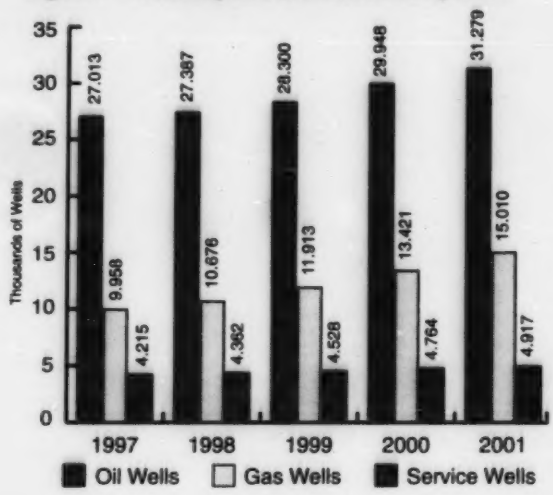
The mandate for this program comes from:

- *The Oil and Gas Conservation Act* and regulations that require companies to submit monthly statistical data and any other information to the department.

Major Activities and Results:

- Processed and verified more than 55,000 statistical reports each month on the production and disposition of crude oil, natural gas, water and associated products from all producing wells in the province. The number of wells capable of production/injection rose by 3,073 wells to 51,206. The number of wells capable of production by well type for the past five years is shown in Figure 7.

Figure 7 - Wells Capable of Production/Injection



- Made a total of 4,185 status updates on new and existing wells and units due to changes related to the date of first production, recompletion, reclassification, and royalty and tax eligibility.

- Handled 1,254 requests from industry for suspension of an active well or for production resumption of an inactive well to facilitate reporting and royalty and tax collection.

- Reviewed and processed a total of 5,265 applications related to facility codes and change of operatorship to ensure proper reporting and maintain the integrity of the database.

- Analysed and entered the terms and conditions of all gas contracts, invoices, transportation agreements and heating value information into system files, in order to facilitate various price monitoring functions required for the verification of reported sales data. The accuracy of the sales information directly affects royalty/tax revenues.

- Handled on a one-day turnaround basis, 1,660 requests for statistical information from industry clients, federal and provincial government agencies, consulting firms, universities and the general public.

- Continued work on the Production and Disposition System (PDS) to concentrate on identifying and implementing measures to increase efficiency, enhance program functionality and reduce operating costs. Prepared 16 new system service requests and completed and implemented 17 service requests.

- Continued monitoring activity under the Mandatory Electronic Data Submission Program for oil and gas volumetric and revenue data. Notified companies meeting a certain well-count threshold and gave them six months to comply with the electronic filing requirements. By year-end, 78 companies were filing electronically, which represents about 70 per cent of the total data volume collected and processed.

- Continued all aspects of the Compliance Enforcement Program for report submission. This includes the preparation of detailed monthly penalty assessment information for invoicing purposes, review and addressing of industry feedback and issues concerning certain aspects of the program, and review and response to penalty appeals. The Compliance Enforcement Program continues to be a success in bringing industry attention to the importance of timely data submission with only about two per cent of the reports remaining late or delinquent.

Resource Regulatory Programs

The resource regulatory programs are responsible for the licensing, inspection and setting of guidelines for the safe and environmentally responsible exploration, drilling and operation of oil and gas wells, battery sites, gas compressors, gas plants, resolution of disputes between operators and landowners, and the disposition and administration of oil, gas and mineral rights.

The resource regulatory activity includes the following specific items:

- review all applications and issue licences to explore, drill, operate and produce oil, gas and related service wells and associated facilities. This ensures that Crown oil and gas rights have been properly acquired, wells are properly located, and drilling and casing requirements are met according to provincial regulations;
- establish guidelines for, and monitor the drilling, production and well abandonment activities of the oil and gas industry;
- monitor and inspect well sites and help resolve disputes between operators and landowners;
- establish pool boundaries, specify spacing between wells, set allowable limits for new wells and monitor production;
- review geophysical licences and seismic plans;
- issue rights to mine minerals, monitor leases and production activity from approved mine sites, issue claims for mineral exploration and review requirements to ensure that claims are still in fact in good standing;
- review mine excavation plans, collect and publish mine production data; and
- manage disposition and administration of Crown oil and gas mineral rights.

1. Oil and Gas Environmental and Safety Standards

The environmental and safety standards program establishes guidelines for, and monitors the drilling, production, operation, and well and facility abandonment, decommissioning and reclamation activities of the oil and gas industry. Standards and procedures are established for casing wells, waste management, reporting and cleaning up spills, storage of products, safe distances for wells, equipment and facilities, injection well design and well abandonment. Ongoing monitoring of oil and gas industry activity ensures operations are being conducted in accordance with established guidelines, standards and policies, and ensures the overall impact to the environment is minimized.

Field offices are located in Lloydminster, Kindersley, Swift Current and Estevan. Staff located in Regina conducts matters pertaining to environmental affairs and the issuance of well and facility licences.

The mandate for this program comes from:

- *The Mineral Resources Act, 1985* and the *Seismic Exploration Regulations, 1999* that established operating procedures for seismic activities; and
- *The Oil and Gas Conservation Act* and associated regulations that govern industry activity as it pertains to the drilling, production, well and facility construction, abandonment, site restoration, reclamation and remediation.

Major Activities and Results:

- Continued to chair a joint industry-government committee that was formed to review and recommend changes to the existing program for addressing abandonment and reclamation liabilities. After extensive industry consultation, *The Oil and Gas Conservation Act* was amended in early 2001. However, *The Oil and Gas Conservation Regulations* still need to be amended.

- Continued to provide a computer software program to assist operators in calculating the appropriate loading rates for disposing of drilling fluids on cultivated lands to ensure the highest environmental protection standards are achieved on a consistent basis.

- Held extensive consultations with industry, government regulators and the general public in developing comprehensive storage standards for the upstream petroleum industry. These new storage standards came into effect January 2002.

- Completed a number of new environmental guidelines in 2001-02 and distributed them to industry, government agencies and stakeholders. These guidelines included:

  - Drilling and Service Rig Flare Tank Designs and Specifications

  - Comprehensive Guidelines on Upstream Storage, Containment and Pollution Prevention

  - Application for a Retrospective Oil and Gas Facility Licence

  Since the introduction of the *Saskatchewan Petroleum Industry/Government Environmental Committee Guidelines*, field staff has been actively enforcing the requirements of the guidelines, and providing technical assistance and expertise to industry and the general public upon request.

- Continued to actively participate with other regulatory agencies in the development of comprehensive land-use strategies for the White Hood, Dore/Smoothstone, Mistatim Marsh, Bjorkdale West Forest and Stove Creek areas.

- Continued to provide rural municipalities with technical and consultative guidance pertaining to the sustainable and balanced development of the upstream petroleum industry within their municipal boundaries. Work continued to progress on identifying land unsuitable for petroleum and natural gas development within the Rural Municipality of Maple Creek No. 111.

- Continued to provide assistance to Saskatchewan Agriculture, Food and Rural Revitalization and Saskatchewan Environment in their efforts to harmonize approaches with respect to the leasing of Crown land for the purpose of oil and gas development.

- Participated on various environmental and safety committees, including the Saskatchewan Petroleum Industry/Government Environmental Committee, the Canadian Petroleum Safety Council, and the Drilling and Completion Committee.

- Had staff represented on the board of directors of the Western Inter-provincial Scientific Studies Association. Provided in-house technical data to the Association that is conducting a world-class flare emission impact on animal health study.

- Field staff conducted 22,682 well, battery and rig site inspections, conducted 1,481 spill inspections, monitored the clean-up of 711 oil and salt-water spills, and assisted in resolving 55 landowner complaints.

- Field staff routinely inspected drilling rigs associated with the new oil and gas wells that were drilled in the province. Also approved, monitored and reported work-over programs.

- Field staff conducted 2,249 inspections of water injection and disposal facilities to ensure proper water handling and injection well bore integrity.

- Approved three new upstream waste processing facilities. The new facilities, in conjunction with the existing facilities, provide state-of-the-art recovery, recycling, containment, treatment and disposal technologies for by-products and waste generated by the upstream petroleum industry throughout the province.

Impacts:

Saskatchewan was the first provincial jurisdiction in Canada to grant approval for commercial disposal of low-level, naturally occurring radioactive material associated with oil and gas production into an approved salt cavern disposal facility. Saskatchewan was also the first provincial jurisdiction in Canada to grant approval for commercial use of produced sand from oil production as a component in cold-mix asphalt for paving roads.

Staff continues to work with Saskatchewan Agriculture, Food and Rural Revitalization and Saskatchewan Environment in developing and implementing comprehensive land-use strategies for Crown lands administered by these departments with regards to solving both real and perceived problems that arise from time to time in the process of developing petroleum and natural gas resources.

Inspections conducted by field staff ensure that industry has complied with regulations governing their operations, thereby minimizing environmental impacts. Department environmental guidelines are generally acknowledged as being practical and effective.

2. Oil and Gas Conservation

The oil and gas conservation program establishes, monitors and enforces sound oil and gas conservation standards to ensure responsible development of the province's oil and gas reserves. The program ensures pool boundaries and well spacing orders are current and establishes and monitors production limitations to ensure that they are not exceeded.

The mandate for this program comes from:

- *The Oil and Gas Conservation Act*;
- *The Crown Minerals Act*; and
- *The Pipelines Act, 1998* and their associated regulations that provides the rules under which the oil and gas industry must operate.

Major Activities and Results:

- Carried out the ongoing activities of establishing pool boundaries and well spacing orders, with 99 orders issued in 2001. The well spacing orders are in response to industry applications to optimize oil and gas recovery.
- Issued production allowable limits for all new oil and gas wells unless good production practices were granted.
- Monitored oil and gas production to determine if well production exceeded that allowed. Sent notification and warnings to all companies that exceeded allowable amounts.

3. Seismic and Well Licences

Under the seismic and well licensing program, the department reviews applications and issues licences to explore, drill, operate and produce oil, gas and related service wells. Seismic contractors and blasters are licensed to ensure certain operating standards are met and to maintain a current record of companies conducting seismic work in the province. By licensing the drilling and operation of oil, gas and service wells, the department ensures Crown mineral rights have been properly acquired, wells are properly located, and drilling and casing requirements are met according to regulations.

The number of well licence applications issued during the 2001-02 fiscal year averaged 269 per month. The decrease in the number of licence applications received relative to the previous fiscal year was directly related to the decrease in the price for oil and gas. Well licence applications received with proper documentation continue to be processed within three working days.

The mandate for this program comes from:

- *The Mineral Resources Act, 1985* and the *Seismic Exploration Regulations, 1999* that provided the authority for seismic licences; and
- *The Oil and Gas Conservation Act* and associated regulations that govern the licensing of oil, gas and service wells.

Major Activities and Results:

- Issued 3,228 well licences, eight seismic exploration licences and 128 explosive permits during the fiscal year. (The lower number of seismic exploration licences and explosive permits reflects the new five-year licence and permit.)
- Registered a total of 7,833 well transfers and 2,580 well name changes. Also registered 77 name changes as a result of corporate name changes and amalgamations.

4. Mine Data and Mineral Statistics

The department is responsible for the development and conservation of all Crown minerals. The mine data and mineral statistics program monitors mining developments; collects, processes and reviews mineral statistical data, including production and value of sales; reviews and reports exploration expenditures; prepares metallic mineral (except uranium) royalty and economic forecasts; issues coal test hole permits; authorizes potash well plugging and abandonments; processes revisions to potash lease or unitized areas; and maintains historical records. It also co-ordinates the review of all environmental project submissions referred to the department and provides input into the Environmental Assessment Technical Review Panel for mining development projects and into the Federal-Provincial Committee on Mineral Statistics.

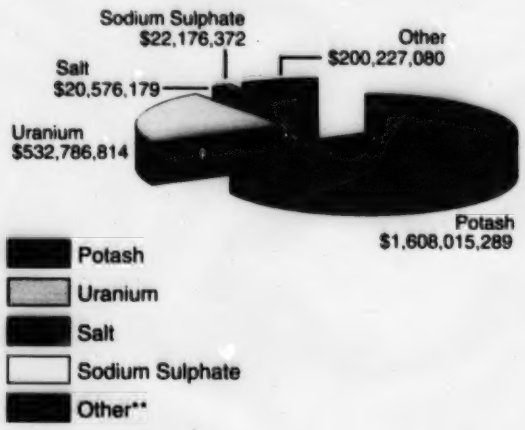
The mandate for these programs comes from:

- *The Crown Minerals Act*
- *The Mineral Resources Act*
- *The Subsurface Mineral Regulations, 1960*
- *The Mineral Disposition Regulations, 1986*
- *The Quarrying Regulations, 1957*
- *The Alkali Mining regulations*
- *The Coal Disposition Regulations, 1988*
- *The Mineral Exploration Tax Credit Regulations, 2001*

Major Activities and Results:

- Twenty-six mining operations including potash, uranium, coal, gold, base metals, salt, clay, bentonite, silica sand and sodium sulphate were in production in 2001-02.
- Collected, reviewed and processed 559 mineral statistics reports. Also handled numerous requests for statistical information.
- Developed mineral statistics database.

Figure 8 - Saskatchewan Mineral Production Value of Sales 2001* (C$2.4 Billion)



* 2001 Value of Sales total is estimated based on third quarter results
** Other includes: Coal, Gold, Copper, Zinc and Bentonite

- Ten potash mines produced 7.8 million tonnes of potassium oxide (K_2O) valued at $561.8 million, and three uranium mines produced 14.7 million kg of uranium oxide (U_3O_8) valued at $561.8 million in 2001-02.
- As shown in Figure 8 the value of sales of non-fuel mineral production reached $2.4 billion in 2001-02.
- Highlights of uranium mining operations include:
  - Completed McClean Lake, mining of the Sue "C" pit. Stockpiled ore will feed the JEB mill for the next four to five years.
  - Cluff Lake remained in production throughout 2001 as higher grade ore was mined from the West Dominique-Janine underground mine. Mining at the Cluff Lake operation will likely conclude in May 2002.
  - At the Key Lake facility, ore from the McArthur River Mine was blended with low-grade and waste rock from Key Lake stockpiles to achieve monthly design capacity of 1.5 million pounds of uranium oxide (U_3O_8) over most of 2001-02.
  - At the Cigar Lake Mine, testing of jet-boring mining systems continued and Cameco Corp. became operator in January 2002.
- The Seabee Mine remained the only primary gold mine in the province in 2001-02 with secondary production from the base metal mines near Flin Flon.
- Base metal (copper and zinc) production continued from the Saskatchewan portion of the Callinan Mine and from the Konuto Mine. Production from the Konuto Mine briefly ceased from April 31 to July 31, 2001, as a result of sufficient copper feedstock at the Flin Flon smelter.
- Silica sand was produced from a quarry immediately southwest of Hanson Lake, approximately 100 kilometres west of Flin Flon, to provide frac sand for the oil and gas industry.
- Participated on the Saskatchewan Mineral Exploration Government Advisory Committee (SMEGAC) to provide a consolidated process for consultation between the mineral exploration industry and Saskatchewan government regulators and to develop practical and efficient environmental guidelines and permitting processes for exploration activities.

Mineral Exploration Expenditures for Grassroots Programs

Mineral	2000 Actual Programs	2000 Actual Expenditures ($million)	2001 Preliminary Programs	2001 Preliminary Expenditures ($ million)	2002 Forecast Programs	2002 Forecast Expenditures ($ million)
Uranium	35	$16.7	23	$14.5	23	$12.5
Gold	7	0.7	5	0.7	4	0.9
Base Metals	8	3.1	6	2.4	6	4.0
Diamonds	8	1.8	8	7.4	4	4.8
Other	7	1.9	3	1.3	6	2.3
Total	**65**	**$24.2**	**45**	**$26.3**	**43**	**$24.5**

- Initiated and promoted the Mineral Exploration Tax Credit program and to encourage investment in Saskatchewan exploration properties by Saskatchewan taxpayers.
- Completed development of the model potash unit agreement; reviewed three unit area proposals that are under negotiation.
- Reviewed and authorized applications for plugging and abandonment of 13 potash production wells at the Belle Plaine mine; revised one potash lease.
- Reviewed 16 annual mine excavation plans.
- Reviewed and authorized applications for 47 coal test holes at the Poplar River Mine and south of the town of Bienfait.
- Co-ordinated the review and response to nine Environmental Impact/Assessment project submissions.

5. Crown Mineral Rights

The department is responsible for the disposition of all Crown minerals and for auditing the assessment work and expenditure report submissions required in order to keep mineral dispositions in good standing.

The mandate for this program comes from:

- *The Crown Minerals Act*;
- *The Mineral Disposition Regulations, 1986* for uranium, base and precious metals, diamonds and other minerals;
- *The Quarrying Regulations, 1957* for clay, bentonite, silica sand and other quarriable substances;
- *The Alkali Mining Regulations* for sodium and ammonia sulphate;
- *The Coal Disposition Regulations, 1988* for coal; and
- *The Subsurface Mineral Regulations, 1960* for potash and salt.

Major Activities and Results:

- Acquired a total of 845 new claims, covering 441,713 hectares, under *The Mineral Disposition Regulations, 1986*. The majority (85 per cent) of the ground acquired was in the surveyed area of the province and was related to diamond exploration. The total number of mineral dispositions in good standing on March 31, 2002, was 3,610 covering a total of 2.6 million hectares. This represents an increase in both the number of mineral dispositions and area under disposition from the previous year.
- Introduced *The Mineral Disposition Amendment Regulations, 2001* in December 2001.
- Reviewed 679 submissions of mineral assessment work and approved $19 million of expenditures. Uranium-related assessment work represented 68 per cent of the approved expenditures, while work related to diamond exploration activities represented 17 per cent of approved expenditures.

- Converted, into digital GIS format, industrial mineral disposition maps (potash, coal, alkali and quarry dispositions) and database files.
- Made metallic mineral disposition maps and database available to downloadable and viewing formats for clients on the department Web site.
- Plotted 800 paper mineral disposition maps for clients; prepared another 500 for internal use.
- Established 10 Crown reserves and reviewed 332 land selections comprising over 221,000 hectares.
- Initiated and partly completed Mapping of Surface Lease Agreements.
- Carried out two claim inspections.
- As shown in the following table, 4,524 metallic and industrial mineral dispositions, totalling 2.98 million hectares, were under disposition as of March 31, 2002.

Crown Metallic and Industrial Mineral Dispositions

Category	March 31, 2001 No.	March 31, 2001 Hectares	March 31, 2002 No.	March 31, 2002 Hectares
Mineral Claims	2,945	2,331,470	3,493	2,471,617
Permits	17	102,228	17	88,773
Special Agreements	1	21,460	1	10,731
Mineral Leases	119	38,495	115	38,003
Alkali Leases	39	32,821	36	31,381
Coal Leases	709	104,335	756	111,864
Quarry Leases	96	4,077	94	4,191
Potash Leases	12	217,164	12	217,196
Total	**3,938**	**2,852,050**	**4,524**	**2,973,756**

6. Administration of Crown Oil and Gas Rights

The department administers and reviews all dispositions of Crown oil and gas rights to ensure that regulatory requirements are met. This process is expanded with the incorporation of the reversion of deeper rights. A registry of conveyance agreements, encumbrances and securities related to Crown dispositions is maintained to monitor business activity and regulated operations.

A database is used to invoice lease rentals and to monitor offset commitments and compensatory royalties. The registry system and search service are used by the oil and gas industry, lawyers, financial institutions and many others.

The mandate for this program comes from:

- *The Crown Minerals Act; and*
- *The Petroleum and Natural Gas Regulations, 1969.*

Major Activities and Results:

- Reviewed all expiring and non-producing petroleum and natural gas dispositions to determine whether the dispositions should be continued. Reviewed a total of 10,461 dispositions.
- Performed 3,011 disposition transactions and 3,671 searches.
- Monitored work requirements of permits and drilling reservations reviewed and enforced offset commitments.

Crown Oil and Gas Rights (Dispositions)

Category	March 31, 2001 No.	March 31, 2001 Hectares	March 31, 2002 No.	March 31, 2002 Hectares
Leases	20,910	4,844,987	20,750	4,884,606
Permits	17	148,496	1	3,258
Exploration Licences	70	161,465	65	186,110
Special Exploratory Permits	4	273,605	4	192,188
Lease of Space Agreements	15	26,061	19	26,127
Total	**21,016**	**5,454,614**	**20,839**	**5,292,289**

- As shown in the above table, 5.29 million hectares of Crown oil and natural gas rights were under disposition as at March 31, 2002.
- Completed conversion of oil and gas dispositions data into a GIS format that is currently being used.
- Twelve helium leases were under disposition with an area of 22,803 hectares and two helium permits were under disposition with an area of 35,370 hectares.
- Three oil shale leases were under disposition with an area of 1,327 hectares and 19 oil shale permit were under disposition with an area of 566,386 hectares.

Administration

The department's administration function includes providing strategic leadership and organizational direction to the department as well as financial, human resources, communications, accommodation and co-ordination services for the department's core business activities.

The administration activity ensures that the other program areas have the requisite level of human resources, facilities, equipment and supplies to carry out their various functions. It also ensures that the department manages within its budget allocation, has adequate internal controls and safeguards government assets, that *Financial Administration Guidelines* are followed, and that the provisions of *The Public Service Act* and the PS/GE Collective Bargaining Agreement provisions are upheld.

1. Human Resources

Human Resources works collaboratively with managers and employees to provide proactive and leading-edge human resource management strategies that support the achievement of department goals.

Major Activities and Results:

- Revised Human Resources Plan for Energy and Mines strategic plan as part of the accountability process.
- Developed and implemented a Training and Development Policy that supports ongoing learning.
- Provided support and guidance to employees and managers during the scope review and allocation process.
- Provided leadership to the departmental Employment Equity (EE) Committee to achieve diversity within the department.
    - Continued partnerships with five community agencies to access designated group candidates;
    - Achieved an increase in hiring persons of diverse cultures through an extension of our Employment Equity Term Hiring Initiative where all term positions between one month and one year in duration are posted for designated groups after running three days in the department.
- Provided leadership to the departmental Occupational Health and Safety Committee to ensure health and safety within the workplace.
- Developed a Violence in the Workplace Policy to ensure employee safety.
- Provided support to the departmental Union-Management Committee to build stronger Union-Management partnerships.
- Continued to support management and employees in day-to-day staffing and classification actions and general inquiries.

2. Administration and Financial Services

The department provides administrative and financial services including: financial management, budget preparation, expenditure accounting and reporting, procurement of goods, mail services and vehicle co-ordination.

Major Activities and Results:

- Processed 99 per cent of supplier payments on time, once again exceeding the government's goal of having its suppliers paid on time in 90 per cent of the cases. Post-audit results for the fiscal year 2001-02 indicate that the department had no instances of non-compliance in the payment of invoices.
- The department's budget for 2001-02 was $30,301,000 and it incurred actual expenditures of $29,924,000. The savings were due largely to the government-wide spending freeze in the later part of the fiscal year.

3. Communications

Communications services included:

- promoting and marketing;
- responding to media inquiries;
- preparing communications strategies, news releases and speeches;
- managing department printing requirements;
- advertising;
- arranging for display production and trade shows;
- managing all magazine, periodical and newspaper subscriptions, and purchase of books and materials for library;
- providing clipping and media monitoring services;
- handling sales and distribution of technical and promotional publications;
- answering public inquiry line and maintaining departmental reference library; and
- providing Webmaster services for the department's Internet Web site.

Communications activities focused on:

- increasing investment in Saskatchewan's mining, oil and gas sectors; and
- raising public awareness of the benefits of the resource sectors in Saskatchewan.

Major Activities and Results:

- Wrote a supplement, entitled *Saskatchewan: Mining – Foundation for Prosperity*, published with the Mining Journal printed out of London, England and distributed to 128 countries.
- Co-ordinated, arranged and paid for the department's presence as a major exhibitor at the Prospectors and Developers Association of Canada convention and trade show in Toronto and the Prospectors' Exchange in Calgary.
- Continued to expand the department's Web site as an important source of information about Saskatchewan's energy and mineral resources.
- Responded to approximately 7,000 public and stakeholder inquiry calls and e-mails.
- Sold $246,603 worth of publications, maps and electronic data, up from $139,896 the previous year. Purchases can now be made by Interact or major credit cards.
- Promoted the Geological Open House and the Williston Basin Horizontal Well workshop. Both events are intended to attract activity and investment in Saskatchewan resources.
- Provided daily clipping and media monitoring services to executive management and the Minister's office.
- Managed magazine, periodical and book subscription orders and renewals for department staff.

4. Accommodation

Payments are made to the Saskatchewan Property Management Corporation for office, storage and lab accommodations, mail services, records management and minor capital renovations.

The department's head office is located in Regina and it maintains field offices in Swift Current, Lloydminster, Kindersley, Estevan, La Ronge and Creighton. All occupied space is leased from the Saskatchewan Property Management Corporation.

The sub-surface geological lab in Regina is being renovated to accommodate the department's increased southern geoscience program. Minor capital renovations are being made to head office to meet geoscience, orphan well and mineral revenue program requirements. The La Ronge and Estevan field offices were also renovated to meet program requirements.

Budget and Actual Expenditures

Sub-Vote	2001-02 Budget ($ 000s)	2001-02 Actual ($ 000s)	Variances ($ 000s)	Notes
Administration Total	**$ 1,533**	**$ 1,354**	**$ (179)**	1
Accommodation and Central Services Total	**$ 2,114**	**$ 2,071**	**$ (43)**	2
Petroleum and Natural Gas Total	**$ 5,130**	**$ 5,160**	**$ 30**	3
Exploration and Geological Services Total	**$ 4,676**	**$ 4,489**	**$ (187)**	4
Mineral Revenues				
Mineral Revenue Collection	$ 3,658	$ 3,430	$ (228)	5
Mineral Compensation	52	50	(2)	
Mineral Revenues Total	**$ 3,710**	**$ 3,480**	**$ (230)**	
Resource Policy and Economics				
Resource Development and Taxation	$ 1,761	$ 1,420	$ (341)	6
Energy Sector Initiatives	1,377	1,030	(347)	7
Energy Credit Program	10,000	10,920	920	8
Resource Policy and Economics Total	**$13,138**	**$13,370**	**$ 232**	
Total Expenses	**$30,301**	**$29,924**	**$ (377)**	
FTE Staff Complement	**278.4**	**243.3**		

Notes:

1) Savings due to vacancies and recoveries pertaining to ministerial assistant agreements.
2) Savings in minor capital.
3) Additional expenses incurred to fund restricted drilling settlement.
4) Savings due to vacancies.
5) Savings due to vacancies.
6) Savings due to vacancies.
7) Savings due to delay of wind power initiative.
8) Additional energy credits.

Activity	2001-02 Budget ($ 000s)	2001-02 Actual ($ 000s)	Variances ($ 000s)	Notes
Resource Development	$ 6,257	$ 5,837	$ (420)	1
Resource Policy	1,210	1,094	(116)	2
Energy Planning and Development	12,387	12,732	345	3
Resource Revenue Collection	3,640	3,435	(205)	4
Resource Regulation	3,160	3,401	241	5
Administration	3,647	3,425	(222)	6
Total Expenses	**$30,301**	**$29,924**	**$ (377)**	

Notes:

1) Savings due to staff vacancies.
2) Savings due to staff vacancies.
3) Additional energy credits offset by savings in delay of wind power initiative.
4) Savings in salaries.
5) Additional costs associated with restricted drilling settlement and flare gas study offset by savings in salaries.
6) Savings in minor capital expenses and recoveries of ministerial assistant salaries and expenses.

(Totals may not add due to rounding)

Budget and Actual Revenues

	2001-02 Budget ($ millions)	2001-02 Actual ($ millions)	Variance ($ millions)	Notes
Non-renewable Resource Revenue				
Oil	$ 511.5	$ 555.3	$ 43.8	1
Natural Gas	167.9	129.1	(38.8)	2
Potash	160.9	179.7	18.8	
Other Minerals	37.0	39.0	2.0	3
Total Non-renewable	**$877.3**	**$ 903.1**	**$25.8**	
Other Revenues				
Mineral Rights Tax	$ 8.1	$ 8.1	$ -	
Other Misc. Revenue	0.6	0.3	(0.3)	
Total Other	**$ 8.7**	**$ 8.4**	**$(0.3)**	
Total Revenues	**$886.0**	**$ 911.5**	**$25.5**	

Major Variance Analysis

1. *The increase in oil revenues of $43.8 million is due to average provincial wellhead prices $0.47 higher than originally budgeted and an increase in production when production royalty or tax incentives have expired.*
2. *The decrease in natural gas revenues of $38.8 million is a result of decrease in the average wellhead prices of $0.69 per million cubic feet (mcf) and its impact on production royalty and tax levels under the province's price-sensitive royalty and tax structure.*
3. *Potash revenues were $18.8 million over budget due to higher profitability per tonne, partially offset by a decrease in actual potash sales than originally forecasted.*

(Totals may not add due to rounding)

Major Saskatchewan Resource Industries Statistical Summary

CRUDE OIL

	1992	1993	1994	1995	1996	1997	1998	1999	2000	(est) 2001
Production (million cubic metres)	13.37	14.97	17.19	18.75	20.94	23.45	23.15	21.71	24.24	24.75
Sales ($ millions)	$1,403	$1,472	$1,878	$2,292	$3,105	$2,868	$1,940	$3,058	$5,034	$3,699
Direct Employment	4,630	5,410	5,730	6,070	6,840	7,860	5,640	6,000	7,440	7,660
Capital Spending ($ millions)	$ 260	$ 558	$ 985	$1,045	$1,436	$2,545	$1,141	$ 920	$1,550	$1,180
Wells Drilled	632	1,315	1,421	1,881	2,539	3,608	1,064	1,391	2,396	1,931
Revenues to Province ($ millions*)										
Net Royalty/Tax	$227.8	$198.5	$306.4	$346.9	$525.1	$354.4	$233.6	$565.6	$712.7	$477.8
Oil and Gas Land Bonus Bids**	$ 17.1	$ 84.0	$202.0	$ 67.6	$140.8	$109.2	$ 48.7	$ 48.1	$ 55.7	$ 55.5
Other Revenue***	$ 17.3	$ 17.9	$ 20.2	$ 32.8	$ 24.8	$ 25.1	$ 22.2	$ 26.4	$ 30.6	$ 22.0
Total Revenues	**$262.2**	**$300.4**	**$528.6**	**$447.3**	**$690.7**	**$488.7**	**$304.5**	**$640.1**	**$799.0**	**$555.3**

NATURAL GAS

	1992	1993	1994	1995	1996	1997	1998	1999	2000	(est) 2001
Production (million cubic metres)	7,474	7,667	8,519	8,715	8,066	7,818	7,694	7,907	8,148	8,257
Sales ($ millions)	$ 323	$ 358	$ 490	$ 347	$ 343	$ 395	$ 423	$ 611	$1,094	$1,260
Net Royalty/Tax ($ millions)*	$ 34.0	$ 50.3	$ 61.4	$ 41.3	$ 53.0	$ 44.1	$ 65.9	$ 91.8	$239.3	$129.1
Direct Employment	305	625	670	395	440	425	575	779	894	933
Capital Spending ($ millions)	$ 37	$ 170	$ 169	$ 42	$ 64	$ 55	$ 73	$ 117	$ 159	$ 186
Wells Drilled	211	969	1,000	268	369	327	634	1,038	1,203	1,395

POTASH

	1992	1993	1994	1995	1996	1997	1998	1999	2000	(est) 2001
Production (thousand K_2O tonnes)	6,179	5,824	7,148	7,925	6,969	8,297	8,646	7,909	8,721	7,799
Sales ($ millions)	$ 808	$ 792	$1,099	$1,210	$1,098	$1,501	$1,611	$1,632	$1,697	$1,598
Net Royalty/Tax ($ millions)*	$ 57.1	$ 51.3	$ 89.0	$122.3	$ 87.6	$189.5	$202.5	$169.5	$199.3	$179.7
Direct Employment	3,030	2,885	2,879	2,958	2,978	3,012	3,143	3,081	3,035	3,061
Capital Spending ($ millions)	$ 43	$ 38	$ 53	$ 70	$ 108	$ 129	$ 161	$ 101	$ 107	$ 109

* *All revenue figures, including royalties/taxes, are for the fiscal year beginning in the year shown.*

** *Land bonus bids are less the Sand Hill credits.*

*** *Other revenues include lease rentals, interest and net royalty payments for the fiscal year beginning in the year shown.*

Major Saskatchewan Resource Industries Statistical Summary

URANIUM

	1992	1993	1994	1995	1996	1997	1998	1999	2000	(est) 2001
Production (million kg)	9.8	10.0	10.6	11.6	13.3	14.2	N/A	N/A	12.2	14.7
Sales ($ millions)	$ 381	$ 375	$ 408	$ 432	$ 651	$ 557	N/A	N/A	$ 419	$ 562
Royalty/Tax ($ millions)*	$ 26.4	$ 31.7	$ 20.2	$ 44.7	$ 57.9	$ 38.5	N/A	N/A	$ 38.7	$ 22.7
Direct Employment (mine site)	1,052	1,198	1,204	1,458	1,749	1,918	N/A	N/A	1,555	1,307
Capital Spending ($ millions)	$ 9	$ 54	$ 37	$ 126	$ 245	$ 277	N/A	N/A	$ 49	$ 48

COAL

	1992	1993	1994	1995	1996	1997	1998	1999	2000	(est) 2001
Production (million tonnes)	10.1	10.0	10.7	10.7	10.9	11.7	N/A	N/A	N/A	N/A**
Sales ($ millions)	$ 100	$ 94	$ 104	$ 116	$ 115	$ 122	N/A	N/A	N/A	N/A**
Royalty/Tax ($ millions)*	$ 13.3	$ 15.3	$ 15.6	$ 15.2	$ 15.1	$ 17.4	N/A	N/A	N/A	N/A**
Direct Employment (mine site)	559	558	573	537	540	580	N/A	N/A	N/A	N/A**
Capital Spending ($ millions)	$ 11	$ 23	$ 8	$ 5	$ 6	$ 9	N/A	N/A	N/A	N/A**

PRECIOUS AND BASE METALS

	1992	1993	1994	1995	1996	1997	1998	1999	2000	(est) 2001
Gold										
Production (thousand troy ounces)	56.4	57.1	50.6	94.9	106.9	131.5	N/A	N/A	N/A	N/A**
Sales ($ millions)	$ 37.1	$ 25.8	$ 25.3	$ 45.4	$ 55.8	$ 67.5	N/A	N/A	N/A	N/A**
Silver										
Production (thousand troy ounces)	7.3	nil	nil	nil	nil	nil	N/A	N/A	N/A	N/A**
Sales ($ millions)	$ 0.04	nil	nil	nil	nil	nil	N/A	N/A	N/A	N/A**
Base Metals										
Production (million kg)	0.7	nil	nil	nil	nil	nil	N/A	N/A	N/A	N/A**
Sales ($ millions)	$ 1.0	nil	nil	nil	nil	nil	N/A	N/A	N/A	N/A**
Precious and Base Metals										
Revenues ($ millions)*	$ 1.2	$ 1.3	$ 1.0	$ 0.4	$ 0.7	$ 1.0	N/A	N/A	N/A	N/A**
Direct Employment (mine site)	100	157	188	232	357	331	N/A	N/A	N/A	N/A**
Capital Spending ($ millions)	nil	$ 5	$ 43	$ 10	$ 15	$ 6	N/A	N/A	N/A	N/A**

OTHER**

(Includes Bentonite, Quarriable Materials, Coal, Uranium, Gold, Silver and Base Metals)

	1997	1998	1999	2000	(est) 2001
Production (million tonnes)	11.69	11.81	11.69	11.22	11.42
Sales ($ millions)	$750.3	$638.2	$672.6	$614.1	$764.8
Revenues ($ millions)*	$ 56.9	$ 47.2	$ 39.8	$ 53.4	$ 37.2
Direct Employment (mine site)****	2,829	2,704	2,505	2,251	1,970
Capital Spending ($ millions)	$ 292	$ 305	$ 296	$ 77	$ 66
Exploration Expenditures ($ millions)***	$ 43.5	$ 29.5	$ 28.4	$ 24.2	$ 26.3

* *All revenue figures, including royalties/taxes, are for the fiscal year beginning in the year shown.*

** *Significant changes in the number of companies producing minerals in Saskatchewan occurred in 1998. Regulatory requirements related to confidentiality do not permit commodity specific information to be released where there are less than three producing companies. This information is aggregated and presented in the category "other" which includes Bentonite, Quarriable Materials, Coal, Uranium, Gold, Silver and Base Metals.*

*** *Uranium, Precious and Base Metals, Diamonds, Silica Sand and Rare Earth Minerals.*

**** *Additionally, approximately 300 Saskatchewan residents are employed at the HBMS operations in Flin Flon, Manitoba.*

Major Saskatchewan Resource Industries Statistical Summary

OTHER MINERALS

	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Sodium Sulphate										
Production (million kg)	283.9	320.4	313.9	313.7	327.3	298.4	293.2	282.9	244.5	160.4
Sales ($ millions)	$21.7	$25.0	$27.4	$25.1	$31.5	$32.7	$30.4	$25.7	$23.0	$22.0
Revenues ($ millions)*	$1.1	$1.5	$1.2	$1.4	$1.6	$1.5	$1.4	$1.2	$1.0	$1.0
Direct Employment (mine site)	147	136	137	143	152	144	159	119	104	58
Salt										
Production (million kg)	578.1	511.9	620.2	701.7	813.1	875.0	750.4	755.8	745.9	823.4
Sales ($ millions)	$18.1	$24.3	$20.2	$22.5	$27.8	$24.0	$22.2	$19.7	$20.1	$21.0
Revenues ($ millions)*	$0.6	$0.6	$0.6	$0.6	$0.9	$0.8	$0.7	$0.8	$0.8	$0.8
Direct Employment (mine site)	224	205	224	224	219	206	198	183	178	170
Bentonite and Other Quarriable Materials										
Bentonite Production (million kg)	4.9	10.5	13.9	12.4	15.3	18.9	N/A	N/A	N/A	N/A**
Bentonite Sales ($ millions)	$0.4	$0.9	$1.1	$1.0	$1.3	$1.6	N/A	N/A	N/A	N/A**
Quarriable Materials Revenues ($ millions)*	$0.1	$0.1	$0.1	$0.1	$0.1	$0.1	N/A	N/A	N/A	N/A**

MAJOR RESOURCE INDUSTRIES TOTALS

	1992	1993	1994	1995	1996	1997	1998	1999	2000	(est) 2001
Sales ($ millions)	$3,092.3	$3,167.0	$4,053.0	$4,490.0	$5,430.4	$5,571.0	$4,664.9	$6,019.5	$8,481.6	$7,364.7
Royalties and Other Revenues ($ millions)	$396.0	$452.4	$717.7	$673.3	$907.6	$781.5	$622.2	$943.2	$1,292.7	$903.1**
Direct Employment	10,047	11,174	11,605	12,017	13,275	14,476	12,419	12,667	13,902	13,852
Capital Spending ($ millions)	$360	$848	$1,295	$1,298	$1,874	$3,021	$1,680	$1,434	$1,893	$1,541

* *All revenue figures, including royalties/taxes, are for the fiscal year beginning in the year shown.*

** *Excludes Mineral Rights Tax.*